

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2000-078212

(43)Date of publication of application : 14.03.2000

(51)Int.Cl.

H04L 27/12

(21)Application number : 10-243305

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(22)Date of filing : 28.08.1998

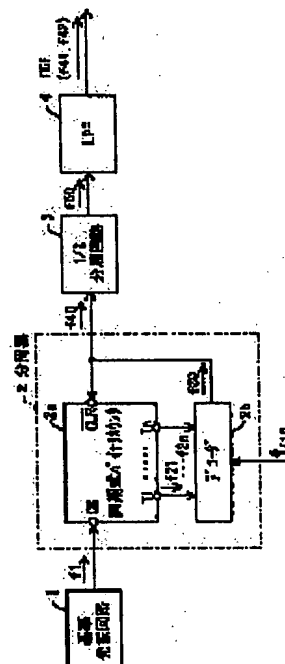
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## (54) FSK MODULATOR

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To improve reliability of data transmission by continuously changing the phase of a signal that is FSK-modulated in the case of switching the digital data.

**SOLUTION:** A reference frequency  $f_1$  outputted from a reference oscillation circuit 1 is given to a frequency divider 2, which generates FSK modulation output signals  $f_{40}$  that are the results of frequency division with two frequencies, by selecting a frequency division ratio based on logical 1 or 0 of digital data  $f_{10}$  and gives the output signals  $f_{40}$  to a 1/2 frequency divider circuit 3. The phases of two carrier frequencies  $f_{41}$ ,  $f_{42}$  of FSK modulation output signals  $f_{51}$  processed, by using the 1/2 frequency divider circuit 3 employing a flip-flop and a low pass filter 4 are continuously changed, and the carriers are transmitted without generating high and low frequency components.



## LEGAL STATUS

[Date of request for examination] 13.02.2003

[Date of sending the examiner's decision of rejection] 05.10.2004

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]